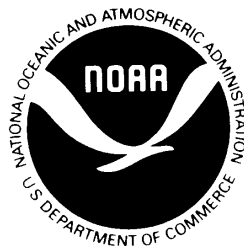


NOAA's Resource Guide

for Teachers of Marine Science



NATIONAL OCEANIC
AND ATMOSPHERIC
ADMINISTRATION

U. S. Dept. of Commerce
Office of Ocean and Coastal Resources Management

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High School Level Books

Animals That Live in the Sea

Straker, Joan A., National Geographic, 1978.

Art & Industry of Sandcastles

Adkins, Jan, Walker & Co., 1982. 64p. ill.

This unique book cleverly combines the popular seaside occupation of sand castle building with the lives and times of ancient castle dwellers. The handsome monochrome illustrations show the sand castle builder and the how and why of castle construction; they help develop a vocabulary and a historical perspective in the process. Gr K-up.

The Atlas of Shipwrecks & Treasure: the History, Location, and Treasures of Ships Lost at Sea.

Pickford, Nigel, Dorling Kindersley, 1994. 200p. ill.

Chronicles the history of treasure-bearing shipwrecks from ancient to modern times. Includes colorful maps of historic trade routes. Gr 9-12.

Beachcomber's Handbook of Seafood Cookery

Zachary, Hugh, Blair, 1981. 208p. ill.

More than a cookbook. This is a sincere commentary on seaside conservation. There's a recipe for just about any common marine animal including octopus. With a serviceable index. Gr 3-up.

The Beaches Are Moving: The Drowning of America's Shoreline

Kaufman, Wallace and Orrin Pilkey, Jr., Duke University Press, 1983. 326p.

Between Pacific Tides

Ricketts, Edward F., Jack Calvin and Joel W. Hedgpeth, Stanford University Press, 1985. 614p. ill.

This is the updated, 5th edition of the classic descriptive guide to marine life on the Pacific coast. Gr 10-12.

Billy Budd

Melville, Herman, C. E. Tuttle, 1993. 416p.

Gr 9-up.

Blue Whale

National Geographic Staff, Random House, 1995.

Caine Mutiny

Wouk, Herman, Buccaneer Bks, 1994.

Gr 9-up.

Canada's Incredible Coast

Gray, William R., Editor, National Geographic, 1991. 199p. ill.

A pictorial description of life in Canada along the Arctic, Atlantic and Pacific Coasts as well as the Gulf of St. Lawrence and the Baffin Bay region. Gr 9-12.

Cannery Row

Steinbeck, John, Viking Penguin, 1994. 224p.

Gr 7-up.

Controlling Nonpoint-Source Water Pollution: A Citizen's Handbook

Hansen, Nancy R., Hope M. Babcock, & Edwin H. Clark II, National Audubon Society, 1988.

Coral Reef

Taylor, Barbara, Dorling Kindersley, 1992. 29p. ill.

Examines the variety of life found on coral reefs, including the seahorse, hermit crab, and sea slug and presents important concepts in biology. Gr K-12.

Deep-sea Vents: Living Worlds Without Sun

Waters, John Frederick, Dutton, 1994. 48p. ill.

Describes the discovery of deep-sea vents and the lifeforms associated with these areas. Gr 6-12.

Dolphins and Porpoises: A Worldwide Guide

Sylvestre, Jean-Pierre, Sterling, 1993. 160p.

Provides detailed descriptions of 43 species with photographs and distribution maps. French language edition available.

Dolphins: The Myth and the Mammal

Alpers, Antony, Houghton Mifflin, 1961. ill.

Historical conceptions, and misconceptions, of dolphins; myths, legends, and true stories. (OP) Gr 9-12.

The Edge of the Sea

Carson, Rachel L., Houghton Mifflin, 1983. 276p. ill.

The plant and animal life environments of the coral reef, sandy beach, and rocky coast are explored in this book. Appreciation of the sea and sealife shines through this book along with scientific insights. Excellent illustrations make this a reference and guidebook. Gr 8-12.

Elkhorn Slough

Silberstein, Mark and Eileen Campbell, Monterey Bay Aquarium, 1989. 64p. ill.

Focuses on the national estuarine sanctuary in Monterey and its abundance of bird and marine life. Part of the Monterey Bay Aquarium Natural History Series. Gr 5-12.

The Encyclopedia of Shells

Wye, Kenneth R., 1992. 288p. ill.

Comprehensive identification guide with pictures of over 1,000 shells arranged by habitat. Attractive and easy to use. Gr 5-12.

Familiar Birds of Sea and Shore

Perkins, Simon, Knopf, 1994. 191p.

A guide to common sea and shore birds of North America with color plates for each species. (OP)

Fish and the Sea

Noel, Spike, Dufour, 1972. 64p. ill.

(OP) Gr 7-up.

The Fish: The Story of the Stickleback

Lane, Margaret, Dial, 1981. ill.

Introduces the unusual mating behavior of the stickleback fish. (OP) Gr 3-9.

Fishes

Zim, Herbert S. & Hurst H. Shoemaker, Western Publishing Co., 1987. 160p. ill.

For the identification of the common fresh and salt water fishes of North America. Species are identified by color pictures. Common and scientific names are given. Useful guide for beginners. Gr 5-8.

Fishes: A Field and Laboratory Manual on Their Structure, Identification and Natural History

Cailliet, George M., et. al., Intl. Thomson, 1986. 194p. ill.

Gr 11-12.

Fishes of the Great Lakes Region

Hubbs, Carl L. & Karl F. Lagler, University of Michigan, 1964. ill.

Gr 9-up.

Freshwater Fury Yarns and Reminiscences of the Greatest Storm in Inland Navigation

Barcus, Frank, Wayne State University Press, 1986. 182p.

Gr 7-12.

Global Marine Biological Diversity: A Strategy for Building Conservation into Decision Making

Norse, Elliott A., Editor, Island Press, 1993. 350p. ill.

Global Marine Environment : Does The Water Planet Have a Future?

Prager, Herman, University Press of America, 1993.

Gray Whales

Gordon, David George and Alan Baldrige, Monterey Bay Aquarium, 1991. 64p. ill.

A thorough introduction to the Gray Whale. Part of the Monterey Bay Aquarium Natural History Series. Gr 5-12.

The Great Book of the Sea

Guerrini, Francesco, Running Press, 1993. ill.

A comprehensive guide to sea life and environments including geographic distribution. Full index, well illustrated. Gr 6-12.

Greenpeace Book of Dolphins

May, John, Editor, Sterling, 1992. 160p. ill.

Gr 10-12.

Hands-on Marine Biology Activities

Kramer, Nikki, Alpha, 1991. 320p. ill.

Lab manual available. Gr 7-10.

How to be an Ocean Scientist in Your Own Home

Simon, Seymour, HarperCollins Children's Bks, 1988. 144p. ill.

A collection of experiments designed to enhance knowledge of the oceans and marine life. Gr 5-9.

The Intertidal Wilderness

Wertheim, Anne, Sierra, 1985. 160p. ill.

Presents the diversity of life in the intertidal areas. (OP) Gr 6-12.

Introduction to the Biology of Marine Life, 6th Edition

Sumich, James L., W.C. Brown, 1995. 465p. ill.

Instructor's manual and test item file available. Also, 50 transparencies and slides. Lab & field investigations in Marine Biology and TestPak 3.0 classroom management software. Gr 7-12.

Introduction to the World's Oceans, 3rd ed.

Duxbury, Alyn C., W C Brown, 1991. 465p. ill.

Instructors Manual Included. Test item file, student study guide, lab manual and transparencies available. (OP) Gr 11-12.

Jacques Cousteau: Champion of the Sea

Reef, Catherine, Twenty-First Century Books, 1992. 72p. ill.

Gr 9-12.

Kelp Forests

Connor, Judith and Charles Baxter, Monterey Bay Aquarium, 1989. 64p. ill.

Introduces the communities found in a Monterey Bay kelp forest and provides a comprehensive look at this incredible rich habitat, home to hundreds of species of plant and animal life. Part of the Monterey Bay Aquarium Natural History Series. Gr 6-12.

The Lives of Whales and Dolphins

Connor, Richard C. & Dawn Micklethwaite Peterson, Holt, 1994. 233p. ill.

Focuses upon the intelligence and communicative abilities of whales and dolphins. Points out how human behavior is linked to the survival and conservation of these fantastic mammals. Gr 9-12.

The Living Ocean

Collins, Elizabeth, Chelsea House, 1994. 110p.

Describes physical qualities of the Earth's oceans, the impact of humans on the ocean's ecology, and suggests improvements. Gr 9-12.

The Living Ocean, Understanding and Protecting Marine Biodiversity

Thorne-Miller, Boyce and John G. Catena, Island Press, 1991. ill.

The Living Sea

Cousteau, Jacques & James Dugan, Lyons and Burford, 1988. 280p. ill.

A classic introduction to the planet and animals of the sea. Gr 9-12.

Marine Animal Collectors: How Creatures of the Sea Contribute to Science & Our Knowledge of Man

Waters, John F., Hastings, 1969. ill.

(OP) Gr 6-9.

Marine Biology and Ocean Science

Anson, August, Balaena Bks., 1990. 340p. ill.

Gr 9-12.

Marine Biology: Environment, Diversity & Ecology

Lerman, Matthew, Benjamin-Cummings, 1986. 458p. ill.

Gr 10-12.

Marine Career Series: Marine-related Occupations, a Primer for High School Students

Stout, Prentice K., URI Sea Grant Communications Office, 1990.

Purpose of this booklet is to assist high school students in understanding the broad scope of job opportunities in marine-related occupations.

Marine Geology: Undersea Landforms & Life Forms

Erickson, Jon, Facts on File, 1996. 208p. ill.

Marine Invertebrates and Plants of the Living Reef

Colin, Patrick L., TFH Publications, 1988. 512p. ill.

Gr 7-up.

Marine Science Careers: A Sea Grant Guide to Ocean Opportunities

Adams, Steve and Tracey Crago, Maine-New Hampshire Sea Grant College Program, 1996. 40p. ill.

Gr 7-12.

Moby Dick

Melville, Herman, C. E. Tuttle, 1993. 512p.

Gr 9-12.

Monsters of the Sea

Ellis, Richard, Knopf, 1994. 429p. ill.

Examines the natural history and mythology of sea animals. Marked with a sense of humor, this is enjoyable and well-researched, covering the gamut from the Loch Ness monster and mermaids to whales and octopi. Over 150 illustrations. Gr 9-12.

Mysterious Sea

Lane, Ferdinand, Ayer, 1947.

A Nation of Oceans

Weber, Michael & Richard Tinney, Center for Environmental Education, 1986. 95p. ill.

Night of Ghosts and Hermits: Nocturnal Life on the Seashore

Stolz, Mary, Harcourt Brace, 1985. 48p. ill.

Describes the life of nocturnal sea creatures. Gr 3-9.

Ocean. Biomes of the World, Set. 1.

Ricciutti, Edward R., Marshall Cavendish, 1995. 64p. ill.

Describes the biomes of rocky tide pools, sandy beaches and offshore waters. Good presentation of environmental issues, clearly written with a color-keyed map identifying worldwide biome locations and distribution.

Ocean Planet: Writings and Images of the Sea

Benchley, Peter, edited by Judith Gradwohl, H.N. Abrams, Inc., 1995. 192p. ill.

Produced in association with the Smithsonian Institution's travelling exhibition, Ocean Planet, this covers a wide range of material concerning the oceans and marine resources conservation.

Ocean Waves and Progressive Oscillatory Waves Syllabus

Sluyter, E. H., National Book, 1977. ill.

Comes with 2 recordings, 4 lessons. Syllabus and tests available. Gr 10-12.

Oceanography

BSA, 1983. 72p.

Gr 6-12.

Oceanography: An Introduction to the Marine Environment.

Davis, Richard A. Jr., W C Brown, 1991. 430p. ill.

Instructor's manual, slides, videotapes, earth science videodisc and classroom management software (TaskPak 3.0) are available. (OP) Gr 8-12.

Oceans

Simon, Seymour, Morrow Jr Bks, 1990. 30p. ill.

An overview of the nature of waves, tides and their effects on the land; ocean currents and their influence of the ocean on weather patterns. Spectacular photographs supplement the text. Gr 3-9.

The Oceans: A Book of Questions and Answers

Groves, Donald, Wiley, 1989. 203p. ill.

An easy-to-use guide encompassing the geology, chemistry, physics, history and biology of the oceans.

Old Man and the Sea

Hemingway, Ernest, Scribner's, 1995.

Gr 9-12.

Our Endangered Planet: Ground Water

Hoff, Mary K. and Mary M. Rodgers, Lerner, 1991. 64p. ill.

The importance of groundwater is explained. Gr 3-9.

Our Endangered Planet: Rivers and Lakes

Hoff, Mary K. and Mary M. Rodgers, Lerner, 1991.

The hazards posed by pollution of the world's water systems are discussed and ideas for restoration are offered. Gr 3-9.

Outermost House: A Year of Life on the Great Beach of Cape Cod

Beston, Henry, Holt, 1992. 256p.

Gr 9-12.

Pearson: A Harbor Seal Pup

Meyers, Susan, Dutton, 1981. 64p. ill.

A true story of the rescue, treatment and release of a seal pup. (OP) Gr 3-9.

Pirates and Privateers of the Americas

Marley, Davis F., ABC-Clío, 1994. 458p.

Articles focus upon people, places and terms such as pieces of eight, Spanish Main, dubloon. Mainly factual accounts of Caribbean pirates. Gr 9-12.

The Random House Atlas of the Oceans

World Conservation Union Staff, Editor, Random House, 1992. 200p. ill.

The atlas shows the environmental status of the world's oceans and presents a number of issues relevant to marine conservation including coastal development, endangered species, fishing, industry and pollution. Separate sections discuss the origins of the oceans, living resources, environment for life, harvesting the seas, and the challenge of conservation. Introduction by Jacques Cousteau. Published in collaboration with the World Conservation Union. (OP) Gr 9-12.

Realms of the Sea

Brower, Kenneth, National Geographic, 1991. 278p.

Explains and explores the natural history of marine habitats.

Rebirth of Nature

DiSilvestro, Roger L., Wiley, 1992. ill.

Several ecosystems are the subject of this exploration of conservation issues including lakes and ocean beaches. The results of conservation efforts are described. Gr 7-12.

Reef: a Safari Through the Coral World

Stafford-Deitsch, Jeremy, Sierra Club Bks, 1991. 200p.

Reef Sharks and Rays of the World: A Guide to Their Identification, Behavior & Ecology

Michael, Scott, W., Sea Challengers, Inc., 1993. 112p. ill.

Restless Oceans

Whipple, A. B., Time-Life, 1983. 176p. ill.

(OP) Gr 7-up.

The Rising Tide: Global Warming and World Sea Levels

Edgerton, Lynne T., Island Press, 1991. 136p.

Rocky Shore

Kingsbury, John M., Chatham Press, 1970. 77p. ill.

The physical characteristics of flora and fauna of the New England Coast are described in great detail. The original environment, subsequent development, and present state of the coastline are also depicted by excellent black and white sketches. Index included. Gr 7-up.

S.E.A. Lab: Science Experiments and Activities. Marine Science for High School Students in Chemistry, Biology and Physics

UNC Sea Grant College Program, ill.

Gr 9-12.

Sand to Sea : Marine Life of Hawaii

Feeney, Stephanie and Ann Fielding, University of Hawaii Press, 1989. ill.

Photographs and text introduce the animal and plant life found on beaches, in tide pools, on reefs, and in shallow and deep ocean waters of Hawaii. Photographs by Ed Robinson.

Save Our Oceans and Coasts

Hirschi, Ron, Delacorte Press, 1993. 72p. ill.

Discusses the characteristics, animal life, and importance of oceans and coastal areas and ways to protect these habitats.

Scientist at the Sea Shore

Trefil, James, Macmillan, 1987.

The beach setting is used to raise stimulating questions about the physical environment. Gr 9-12.

Sea Animals

Detorie, Rick, Tor Books, 1990.

The Sea Around Us

Carson Rachael, Oxford University Press, 1991. 278p.

This classic has won many accolades including the National Book Award. It describes the formation and history of the seas, currents, and relation of the seas to man. Gr 8-12.

Sea Change : A Message of the Oceans

Earle, Sylvia A., Putnam's Sons, 1995. 361p. ill.

Includes new findings from sea exploration and discusses marine resources, marine pollution, and conservation issues. Gr 9-12.

Sea is All About Us: A Guide to Marine Environments of Cape Ann & Other Northern New England Waters

Robbins, Sarah F., Peabody Essex Museum, 1973.

Sea Jellies

Gowell, Elizabeth Tayntor, Franklin Watts, 1993. ill.

Gr 6-12.

Sea of Cortez: A Leisurely Journal of Travel and Research

Steinbeck, John & Edward F. Ricketts, Appel, 640p.

Sea Otters

Riedman, Marianne, Monterey Bay Aquarium, 1990. 80p. ill.

A comprehensive look at otters' life cycle, social behavior, environment, and survival. Part of the Monterey Bay Aquarium Natural History Series. Gr 5-9.

Sea Wolf

London, Jack, Bantam Bks, 1994.

Gr 7-up.

The Sea World Book of Dolphins

Leatherwood, Stephan and Randall Reeves, Harcourt Brace, 1987. ill.

Gr 3-9.

Sealife: A Guide to the Marine Environment

Waller, Geoffrey, Editor, Smithsonian, 1996. ill.

An advanced treatment of marine biology and oceanography. Gr 11-12.

Seals and Sea Lions

Gordon, David George, Monterey Bay Aquarium, 1994. 64p. ill.

Presents the physical characteristics, life cycle and behavior of seals and sea lions. Part of the Monterey Bay Aquarium Natural History Series. Gr 5-12.

Seals and Sea Lions of the World

Bonner, W. Nigel, Facts on File, 1994. ill.

Gr 9-up.

The Seas: A Celebration of Nature, in Word and Image

Lovric, Michelle, Editor, Courage Bks, 1996. 63p. ill.

A beautiful anthology of poetry about the sea wonderfully paired with paintings.

Seas and Oceans

Lambert, David and Anita McConnell., Facts on File, 1985. 64p. ill.

Gr 7-up.

Seashore Life on Rocky Coasts

Connor, Judith, Monterey Bay Aquarium, 64p. ill.

Gr 5-12.

Seashores: A Guide to Animals and Plants Along the Beaches

Zim, Herbert S. & Lester Ingle, Golden Press, 1955. 160p. ill.

About 460 forms of seashore life are described and illustrated in this attractive and authoritative book. A useful companion at the beach. Index lists scientific names of the plants and animals discussed. Gr 5-12.

Seaside Studies in Natural History: Marine Animals of Massachusetts Bay

Agassiz, Elizabeth C. and Alexander Agassiz, Ayer, 1975.

Gr 8-12.

Seawater: A Delicate Balance

Meyerson, A. Lee, Enslow, 1988. 64p. ill.

Provides an in-depth look at the chemistry of ocean water. Discusses the salinity of the sea, how balance is maintained, and the effects of pollution. (OP) Gr 6-12.

The Secret Life of Fishes

Gordon, Bernard L., Book and Tackle, 1980. ill.

An introduction to salt and freshwater fishes. Gr 9-12.

Sharks

Coupe, Sheena, Facts on File, 1990. 72p. ill.

Gr 3-up.

Sharks and Rays of the Pacific Coast

Ferguson, Ava and Gregor Calliet, Monterey Bay Aquarium, 1990. 64p. ill.

Describes many varieties of shark living in the Monterey Bay region and provides an in-depth look at their lives in natural habitats. Part of the Monterey Bay Aquarium Natural History Series. Gr 6-9.

Sharks: The Perfect Predators

Hall, Howard, Blake, 1990. 39p. ill.

Depicts sharks in their natural environment. Gr 6-9.

Sharks: The Silent Hunters of The Deep

Readers' Digest Readers, Readers' Digest, 1987. ill.

Provides an historical overview of sharks from ancient times to present day research on shark behavior. Gr 6-12.

Ship

Macaulay, David, Houghton Mifflin, 1993. 96p.

Marine archeologists study a wreck found in the Caribbean and find a diary about the building of a caravel in 1504.

The Silent World

Cousteau, Jacques, Isis, 1989.

Cousteau describes undersea exploration. Gr 9-12.

Stanley's Aquarium

Fayville, Barry, Oxford University Press, 1990. 152p. ill.

(OP) Gr 7-up.

Threatened Oceans

Tesar, Jenny, Facts on File, 1992. 128p. ill.

Gr 7-12.

Tuna & Billfish: Fish Without a Country. 2nd ed..

Joseph, James et al., Inter-Am Tropical, 1980. 53p. ill.

Gr 7-12.

Two Years Before the Mast

Dana, Jr., Richard H., Lake, 1994. 64p.

Gr 7-12.

Typee

Melville, Herman, Buccaneer Bks, 1990.

Under the Sea-Wind

Carson, Rachel, New American Library-Dutton, 1992. 320p.

An obvious love and understanding of the interdependence and life of the sea is conveyed in Carson's book. She selects several animals of different species to follow closely as they affect and are affected by their environment. Beautifully written. Gr 7-up.

The Underwater Wilderness: Life Around the Great Reefs

Roessler, Carl, McGraw-Hill, 1989. ill.

Includes photographs by the author, index.

The Vanishing Wetlands

Duffy, Treat, Franklin Watts, 1994. 159p.

Explains what wetlands are, why they are vanishing, and what may be done to preserve them. Appropriate for young researchers and higher level students. Gr 9-12.

The Voyage of the Mimi

Driggs, Lorin, Editor, Holt, 1985. ill.

The Mimi is a ship used by scientists to study humpback whales. This describes the scientists' research and offers several interesting activities. Gr 3-9.

Water: Its Global Nature

Allaby, Michael, Facts on File, 1992. 208p.

Describes the basic properties of water and its essential role for life on Earth. Explains the motion of rivers, currents and tides as well as waters' influence on weather and climate. With glossary, bibliography, and maps.

The Water Planet

Watson, Lyall, Crown Publishers, 1988. ill.

Discusses the physics and chemistry of water describing its role in life science, physical science and earth science. Gr 6-12.

Water: The International Crisis

Clarke, Robin, MIT Press, 1993. 193p.

The Wealth of Oceans: Environment and Development on Our Ocean Planet

Weber, Michael L. and Judith Gradwohl, W.W. Norton & Co., 1995. 256p. ill.

An excellent overview of environmental conservation issues. Includes bibliographical references and index.

Wetlands in Danger: a World Conservation Atlas

Dugan, Patrick, Oxford University Press, 1993. 187p.

Discusses the value and characteristics of wetlands with maps to illustrate wetland regions throughout the world. Gr 9-up.

A Whale For the Killing

Mowat, Farley, Bantam Bks, 1984.

Based on true-life incidents, this book discusses the devastation of whale populations. Gr 6-12.

The Whale: Mighty Monarch of the Sea

Cousteau, Jacques-Yves, Doubleday, 1972. ill.

Cousteau provides an absorbing introduction to a wide variety of whales. Gr 6-12.

Whales

Dow, Lesley, Facts on File, 1990. 68p. ill.

Describes the physical characteristics, life cycle and habitat of whales and discusses man's relationship with whales over the years. Includes a glossary and index. (OP) Gr 3-up.

Whales, Dolphins and Porpoises: The Visual Guide to all the World's Cetaceans

Carwardine, Mark, Dorling Kindersley, 1995. 256p. ill.

A substantial field guide to cetaceans with over 900 illustrations and detailed written descriptions. Gr 9-12.

Whales: Giants of the Deep

Patent, Dorothy Hinshaw, Holiday House, 1984. ill.

Presents a variety of whales, their physical characteristics, behavior, habitat and life cycle. Gr 3-9.

Whalesinger

Katz, Welwyn, Simon & Schuster Children's, 1991. 224p. ill.

Gr 7-up.

The World of the Sea Otter

Paine, Stefani, Sierra Club Bks, 1993. 132p.

An excellent book, well illustrated with photographs. This covers otters' life and habitat as well as the impact of humans upon otters.